

STUDIES IN THE LIABEAE (ASTERACEAE). XVI.

NEW TAXA FROM PERU.

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Two taxa of Liabeae are described below which were not included in the recent revision of the tribe (Robinson, 1983). One of the taxa, that was collected just before the revision was published, proves to represent an entirely undescribed genus.

LIABUM SAUNDERSII H. Robinson, sp. nov.

Plantae suffruticosae ca. 1.7 m altae sparse vel mediocriter ramosae. Caules teretes dense persistentiter albo-tomentosi, nodis disciferis, discis in diametro ad 2 cm. Folia opposita, petiolis 1-2 cm longis late alatis in discis nodarum confluentis; laminae ovatae plerumque 5-10 cm longae et 1.5-4.5 cm latae base breviter acutae in petiolis alatis confluentae margine utrinque 10-20-serrulatae apice breviter argute acuminatae fere ad basem ascendentiter ad 3/5 longitudinem laminarum attingentes trinervatae supra distincae pilosulae subtus dense persistentiter albo-tomentosae. Inflorescentiae in ramis terminales in nodis primariis superioribus subumbellatae, ramis ultimis 5-15 mm longis dense lanate albo-tomentosis. Capitula ca. 13-14 mm alta; involucra late campanulata 14-16 mm lata brunnescentes subpersistentiter arachnoideo-albo-tomentosa; squamae involucri ca. 150 anguste lanceolatae vel lineares 2-10 mm longae et 0.7-1.0 mm latae apice anguste acutae margine superne minute setuloso-fimbriatae extus plerumque glabrescentes. Flores radii ca. 30? feminei; corollae flavae, tubis ca. 8 mm longis tenuis extus plerumque glabris apice sparse minute puberulis, laminis anguste linearibus ca. 7 mm longis et 1 mm latis plerumque glabris apice extus minute scabridulis. Flores disci hermaphroditi ca. 125; corollae flavae ca. 11 mm longae, tubis 5-6 mm longis tenuibus superne sensim leniter latioribus glabris, faucibus ca. 3 mm longis extus glabris linearibus ca. 2.5 mm longis et 0.35 mm latis distaliter spiculiferis apice valde dense spiculiferis; filamenta in parte superiore ca. 0.4 mm longa; thecae antherarum ca. 3 mm longae; appendices antherarum oblongae ca. 0.45 mm longae et 0.18 mm latae; scapi stylorum in partibus superioribus hispidulis ca. 1 mm longi; rami stylorum filiformes ca. 5 mm longi. Achaenia ca. 2 mm longa 10-costata dense breviter setulifera; carpopodia late truncata brevia; setae pappi albae longiores ca. 30 ad 7 mm longae distaliter leniter latiores, scabris in apicibus minute mucronatis; setae breviores tenuiores plerumque 0.5-2.0 mm longae. Grana pollinis in diametro ca. 27 μ irregulariter spinulifera.

TYPE: PERU: Junin: Prov. Tarma, Dist. San Ramon. About 200 ft. above road, left side, about 15 kms from San Ramon towards Tarma. c. 3,400 ft. In deep humus, on steep hillside. Orange flowers. About 5 ft. tall. 15.8.1960. S. G. E. Saunders 559 (Holotype, IJ).

The new species is closely related to *Liabum wurdackii* Ferreyra of northern Peru, having similar terete stems and narrow involucral bracts. The related species, however, is less robust with greener less persistently arachnoid-tomentose involucral bracts, has petiolar wings always narrowed to the base, and lacks hairs on the upper leaf surface in all but one specimen. In the case where the leaf surface has hairs, those hairs are not always present or as large as those in the new species. The location of the new species in central Peru seems isolated from the known range of *Liabum wurdackii* in Amazonas and immediately adjacent Cajamarca.

The new species is named for the collector, S. G. E. Saunders.

BISHOPANTHUS SOLICEPS H. Robinson, gen. et sp. nov.

Plantae fruticosae ad 1/2 m altae mediocriter vel multo ramosae. Caules lacticiferi pallide rufescentes in internodis brevibus articulati dense albo-lanati in basis foliorum arcte investientes. Folia opposita base valde vaginata, vaginis plerumque ca. 5 mm longis quam internodis longioribus et in partibus imbricatis extus lanato-tomentosis, petiolis brevibus ca. 0.5 mm longis; laminae oblongo-ovatae plerumque 2-4 cm longae et 8-16 cm latae base rotundatae margine multo distincte serrulatae apice breviter acutae fere ad basem valde sublongitudinaliter trinervatae supra bullatae in nervis majoribus distincte insculptae et diffuse arachnoideo-tomentosae subtus dense cinereo-lanato-tomentosae in nervis majoribus exsculptae. Inflorescentiae in ramis foliosis abrupte terminales unicapitatae. Capitula ca. 1 cm alta et ex radiis ca. 12 mm latis; squamae involucri ca. 25 subaequales ca. 2-seriatae oblongo-lanceolatae 7-8 mm longae et ca. 1.5 mm latae exteriores apice reflexae supra virides subglabrae subtus dense albe lanato-tomentosae interiores non reflexae acutae subglabrae. Flores radii ca. 20 feminei; corollae flavae, tubis 2.5-3.5 mm longis anguste infundibularibus sparse patentiter piliferis, laminis linearibus 11-12 mm longis et ca. 2 mm latis apice tridentatis extus base breviter minute biseriate piliferis superne subdense arachnoidea-tomentosis et multo glandulo-punctatis. Flores disci ca. 25 hermaphroditi; corollae flavae 7.0-7.5 mm longae, tubis ca. 2.5 mm longis leniter infundibularibus extus sparse patentiter recte piliferis, pilis uniseriatis, faucibus ca. 2.5 mm longis subcylindraceis inferne breviter paucis biseriate piliferis et persparse longe patentiter uniseriate piliferis superne vix piliferis et sparse glandulo-punctatis, lobis linearibus ca. 2.8 mm longis et 0.5 mm latis submarginis paucis stomatiferis extus multo glandulo-

punctatis et subdense arachnoideo-tomentosis; filamenta in parte inferiore laevia in parte superiore ca. 0.25 mm longa, cellulis breviter oblongis in parietibus firmis inornatis; thecae antherarum ca. 2.5 mm longae, cellulis obscuris aliquantum oblongis in scutis tenuiter irregulariter areolatis; appendices antherarum oblongo-ovatae ca. 0.4-0.5 mm longae et 0.22 mm latae in superficiis laevis; basi stylorum distincte noduliferi; scapi stylorum in partibus superioribus hispidulis ca. 3 mm longi; rami stylorum ca. 1 mm longi. *Achaenia* ca. 2.7 mm longa 8-10-costata breviter setulifera pilifera et glandulifera, setulis numerosis contortis superioribus longioribus, pilis persparsis uniseriatis, glandulis breviter stiptitatis minute capitatis sparsis; carpododia breviter obturaculiformia subannuliformia ca. 0.35 mm lata et 0.15 mm longa, cellulis 12-15-seriatis in diametro ca. 12-15 μ m in parietibus incrassatis; setae pappi dense congestae majores ca. 35 interdum irregulariter elongatae plerumque 4.5-6.0 mm longae apice tenues; setae exteriore breviores tenuiores plerumque 0.7-1.0 mm longae, scabris simplicibus. *Grana pollinis* in diametro ca. 37 μ m irregulariter spinulosa.

TYPE: PERU: Amazonas: Mountains behind Tingo. Elevation ca. 6500 ft. Spreading shrub 1/2 meter tall, flowers yellow, copious milky sap. 21 January 1983. R. M. King & L. E. Bishop 9280 (Holotype, US).

Unfortunately, the new genus became available at the time when the hopefully complete generic review of the tribe was within a month of publication (Robinson, 1983), an example of remarkably poor timing. The new genus is clearly a member of the subtribe Liabinae, but is not a member of the specialized group containing *Liabum*, *Oligactis* and *Ferreyranthus* which seems to characteristically lack latex. The new genus superficially resembles *Cacosmia*, but is not necessarily closely related, differing by the solitary heads, subequal involucral bracts, and well-developed capillary pappus. As preserved, the raphids in the achene walls are short, but they are in elongate cells and may be under-developed. The raphid form is definitely unlike the quadrate type characteristic of the Munnoziinae and the generic pair *Liabum-Oligactis*. The strongly trinervate leaves furnish an additional distinction from the genus *Ferreyranthus*. The genus furnishes further evidence that the center of diversity of the tribe is in northern Peru and southern Ecuador. The genus is named for the collector L. E. Bishop.

Litersture Cited

- Robinson, H. 1983. A Generic Review of the Tribe Liabeae (Asteraceae). Smiths. Contrib. Botany 54: 1-69.



Liabum saundersii H. Robinson, Holotype, Institute of Jamaica, Kingston. Photos by Victor E. Krantz, Staff Photographer, National Museum of Natural History.